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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,738	01/09/2001	William L. Bong	ARC 01.002	7735

7590 11/23/2004

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EXAMINER	
KERNS, KEVIN P	

ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/757,738	BONG, WILLIAM L.	
	Examiner	Art Unit	
	Kevin P. Kerns	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☒ Claim(s) *1,9 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 September 2002 and 06 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors (grammatical, typographical, and idiomatic). Cooperation of the applicant is requested in correcting any errors of which the applicant may become aware of in the specification, in the claims, and in any future amendment(s) that the applicant may file. As examples, on page 15, 8th line, "limitaition" should be changed to "limitation". Also, on page 18, lines 11-13, these two sentences should be combined, and "to" should be changed to "too" in line 12.

Claim Objections

2. Claims 1, 9, and 13 are objected to because of the following informalities: in the 3rd line from the end of each claim, "insulators" should be changed to "insulator modules" to obtain proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burden (US 3,243,568) in view of Wada et al. (US 4,208,564), and further in view of Saito et al. (JP 3-297587).

Burden discloses an electric welding process and apparatus for electroslag welding, in which an insulated consumable guide tube is comprised of elongated strips 41 and 42 (with front and back faces) and has plural longitudinal channels to receive welding wires (column 1, lines 11-14 and 53-72; column 2, lines 1-72; column 3, lines 1-25 and 54-71; column 4, lines 1-29; and Figures 1-10). The guide tubes would selectively be bare or given an insulating coating of slag forming material, and are selected in a plurality of arrangements in terms of dimensions and geometries, which are illustrated in Figures 5 and 10, and would furthermore be selected as representatives of routine choices by one of ordinary skill in the art depending on welding conditions (column 4, lines 25-28; and Figures 5-10). The triangular shape limitation of claim 6 is considered to be representative of an arbitrary choice for the shape of the electrode guide cross section shown in Figure 9. Burden does not disclose the plural insulator modules, with at least one of the plural insulator modules configured to melt into a molten flux puddle.

However, Wada et al. disclose a nozzle structure of electroslag welding machines, in which nozzle plate 117 contains a plurality of insulator modules 120 (of varying numbers and heights, as shown in Figure 5), for the purpose of preventing a short circuit in the weld gap between the nozzle plate 117 and the surfaces of the

planks to be welded (abstract; column 1, lines 9-13 and 53-68; column 2, lines 1-9; column 3, lines 39-52; and Figures 1-5).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the electric welding process and apparatus for electroslag welding, as disclosed by Burden, by adding the plurality of insulator modules, as taught by Wada et al., in order to prevent a short circuit in the weld gap between the nozzle plate 117 and the surfaces of the planks to be welded (Wada et al.; column 3, lines 39-50).

Neither Burden nor Wada et al. discloses that at least one of the plural insulator modules is configured to melt into a molten flux puddle.

However, Saito et al. disclose an assembly comprising a flux ring and consumable nozzle for preventing swing in electroslag welding, in which the assembly includes a consumable nozzle 24 positioned between base materials (10,12), and a flux ring (26,40) that includes an insulating spacer (46,54) with projections 58 (insulator module assembly) for centering of the consumable nozzle 24, with at least the flux ring (26,40) portion of the insulating spacer assembly being configured to melt into a molten flux puddle 33, for the purpose of preventing melting imbalance between the base materials (abstract; and Figures 1-15).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the electric welding process and apparatus for electroslag welding, as disclosed by Burden, by adding the plurality of insulator modules, as taught by Wada et al., in order to prevent a short circuit in the weld gap

between the nozzle plate 117 and the surfaces of the planks to be welded, and by further using at least one of the plural insulator modules configured to melt into a molten flux puddle, as disclosed by Saito et al., in order to prevent melting imbalance between the base materials (Saito et al.; abstract).

Response to Arguments

5. The examiner acknowledges the applicant's amendment provided with the request for continued examination received by the USPTO on November 5, 2004. The applicant has overcome the prior claim objection. However, new minor objections to the specification and claims were found upon further review of the application. Claims 1-20 remain under consideration in the application.

6. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns Kevin Kerns 11/18/04
Examiner
Art Unit 1725

KPK
kpk
November 18, 2004